

Chapter 14: Select Appropriate Delivery System(s) (Media Selection)

What Is It?

CAUTION: When reading this chapter, be sure you read Chapter 26, Identify Instructional Methods and Strategies, Chapter 17, Conduct a Cost-Benefit Analysis (CBA), and Chapter 18, Design and Develop an Instructional Plan (IP) at the same time. In this time when the Coast Guard is beginning to move toward alternative deliveries, it is essential that Coast Guard course designers have a full picture of the impact of specific choices. Failure to have that big picture can result in spending much time and money developing a program, only to find out the Coast Guard will not support its maintenance or development.

Selecting a delivery system means figuring out, **BEFORE** you design a training intervention, how you are going to “deliver” that training intervention.

NOTE: A common mistake in the training design business is to confuse delivery systems with instructional methodologies. Delivery systems are the means available to deliver training (e.g., an instructor or facilitator, CBT, video with workbook, correspondence course, and WBT). All of these examples (and others not mentioned) are ways you might decide to “deliver” training. In contrast, instructional methodologies are the strategies the training designer chooses to make sure learning and transfer to the job take place. Examples of instructional methodologies are: case studies, role-plays, small group instruction, lectures, demonstrations, and so forth.

There are many different ways to classify different delivery systems. One classification system you might find helpful follows:

People-dependent deliveries: Is the training people-delivered--that is, dependent on an instructor (or peers) to lead or facilitate activities? Some examples of people-dependent delivery systems are:

- Resident training.
 - Some simulations.
 - Mobile training teams.
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What Is It? (continued)

- Structured on-the-job training (OJT).
- Seminars and conferences.
- Interactive video teletraining (IVT). (This method is a “hybrid”; it depends on both the instructor and videos, computers and even satellites, for its delivery.)
- Peer-learning. (“Peers” train each other by demonstrating, practicing, and coaching activities which is a good delivery system to use when you want to get students practiced in using job aids to perform a task.)

Computer-assisted deliveries: The FT “A” course discussed in this SOP is both people-dependent and computer-assisted in its delivery methods. Instructors lead and facilitate learning, but NIDA trainers and computer software deliver most of the instruction, the tests, reviews and practice exercises. NIDA trainers also perform many “instructor type” tasks: tracking students’ performance, maintaining records, and producing administrative and statistical reports. This type of delivery system is often referred to as “computer-assisted” instruction (CAI).

Another type of computer-assisted instruction is IVT. This type of instruction is instructor-led, but the instructor is remote from most of the students. The instructor controls student interactions through manipulation of video teletraining equipment. The instructor also uses a computer to deliver presentations and to communicate with students at remote sites, via features such as chat rooms and e-mail. Using computers at their sites, students taking the course can also communicate with the instructor and with each other, even though they are at locations very remote to the site beaming out the instructional event.

Student-centered, self-paced instruction: This type of delivery depends on the student interacting with print media; audio-visual deliveries; or computer-assisted, self-paced instruction. Some examples of student-centered, self-paced instruction are:

- Videotape and workbook.

What Is It? (continued)

- Print media such as correspondence courses.
- Cassette tape and workbook.
- Job aids and job-related equipment or simulators.
- WBT--self-paced, interactive instruction delivered to students' desktops, via the internet or intranet. This type of instruction is student-centered and self-paced. Students know, at all times, how they are doing and there is considerable branching to allow students to learn in their own way.
- CBT--self-paced, interactive courseware often delivered via the CD drive on a student's computer. As with WBT, CBT is student-centered and allows the student many possibilities for self-remediation until the student fully grasps the material. Both CBT and WBT, though, generally rely on an organizational intranet for delivery.
- Other examples of student-centered instruction that depend on a computer are various types of electronic performance support systems (EPSSs). Of special note are the Electronic Systems Operating Manual (ESOM), Interactive Electronic Technical Manual (IETM), and Shipboard Operational Regulations Manual (SORM). These hybrid deliveries rely on hyperlinking ("jumping," with the click of a computer's mouse, to another related subject) for ease of use and often include training features such as virtual ship tours, video clips, drop-down job aids, and so forth.

How Do I Select Delivery System(s)?

There are many media selection models available that can help you select appropriate delivery systems for part or all of your training. Some of the models are found only in paper form; others are electronic.

How Do I Select Delivery System(s)? (continued)

In the best of all worlds, use a team to perform media selection. The key person on the team is the SME who is thoroughly familiar with the subject matter, tasks, and task steps. However, another good member to have is an instructional technologist (IT), instructional system specialist (ISS) or training specialist (TS).

This person should be thoroughly familiar with adult learning theory, all training design issues, various training strategies, and with the various capabilities different media possesses.

However, when you can't get such a team together, don't worry. Using a good media selection model, you can easily perform media selection on your own. If there are any questions, these can be referred to the IT, ISS or TS at another time.

NOTE: Media selection is **NOT** a science. What you get from a media selection is a set of recommendations, not a prescription!

Once you get familiar with several different models, you will quickly see that many of them appear to have a bias. For example, those media selection models developed by companies selling CBT may mysteriously lead you every time to CBT. Such models have a very low confidence level.

We will try to steer you toward models with more credibility. But remember, media selection is just a recommendation. As you'll see when you do an Instructional Plan (IP), just because the model says CBT, you may not end up delivering training that way. An EPSS may be cheaper and provide better help on-the-job...particularly if the JTA said the task should be job-aided. And even that EPSS may not be a good choice if the student population hasn't yet migrated to **SWSH**.

How Do I Select Delivery System(s)? (continued)

Media selection is just one piece of data that goes into designing a training intervention.

Some software programs (e.g., Advisor) have a media selection feature. Look at the newest upgrade Advisor demo to see if you like the way it works. However, without the software, you won't be able to take advantage of its on-line features (calculating, printing, reporting, charting).

The Naval Air Warfare Center--Training Systems Development (NAWC-TSD) in Orlando has developed an excellent media selection model and will give you a copy on request. The model may be on-line now; check their web site. The training technology selection process for this model uses flowcharts to identify training objectives that call for physical or intellectual skills or training attitudes.

DOT's FAA has developed a very good media selection model that you can request. One feature of the FAA model focuses on the relationship between media and media aids by identifying the critical characteristic for each medium, one which no other medium could satisfy so well as the others (i.e., practice to proficiency, hands-on activity, active interaction, etc.). However, other parts of the model are FAA-specific so you may find it hard to tailor to your situation.

PTC staff has developed a media selection model by taking the best characteristics of the FAA and NAWC-TSD models and adapting them to Coast Guard training needs. One of the best features of this media selection model is that it starts by looking at learning outcomes:

- Is the predominate learning outcome a psychomotor skill--operate, perform, repair?
 - Is the predominate learning outcome an intellectual skill, knowledge, etc.--identify, inspect, troubleshoot?
 - Does the predominate learning outcome deal with attitudes, feelings and emotions--leadership, diversity training?
-

**How Do I Select
Delivery Systems
(Media)?
(continued)**

This sort of model tracks very well with the skills (psychomotor), knowledge (intellectual or cognitive), and attitude (affective mode) any training interventions will predominately be made up of.

The model has been tried out during several JTAs. It has no special biases, and it offers several possible media for each decision you make. PTC uses the model to make initial media recommendations for each task in a JTA effort. That way, media selection results can be incorporated into the JTA report.

You will find a copy of this model at the end of this SOP chapter. It is your job aid for performing media selection. As the model tells you, ITs, ISSs, and TSs are available to help you when you do media selection.

How Long Will It Take?

Not long at all. If there are few tasks, you can accomplish media selection in an hour. If there are many tasks, it may take you a day.

What Will I Get Out of It?

After you perform media selection, you will have media recommendations for each task in your course. If most or all of the tasks are the same type of medium, that fact will indicate you should choose that particular type of medium for training delivery.

If media selection indicates that some tasks should be delivered by one medium, and others by another, you can choose a training design that uses various media for its delivery.

A more typical result of media selection is a “mixed-bag.” For example, media selection for MK “A” quals indicated that the “knowledge” portion of the course should be delivered by self-paced, student-centered instruction and, in this case, by CBT. However, the hands-on work with equipment in MK school’s labs will be instructor-led demonstrations and practice in various labs.

What Will I Get Out of It?
(continued)

Media selection from a JTA report are included at the end of this chapter. That excerpt shows you the outputs from a media selection effort.

Why and When Do I Do Media Selection?

Why:

You do media selection so you can determine what other types of delivery systems would work for your training.

Why do you want to do that? Because relying solely on resident training for our people has caused some significant problems for the Coast Guard:

- Resident training is very expensive and the cost keeps going up and up.
 - Alternative delivery systems can be more effective and efficient than resident training courses.
 - Most of today's training has technological components. Using technology to learn technology facilitates learning.
 - Our TRACENs are not big enough and they don't have enough instructor staff to train all of the people who need training. That means only some of the people who need this intervention get it.
 - In the Coast Guard's current state, staffing and funding are competitive. That means there is always the threat that instructor and training designer staff may be snatched up for a higher priority. Yet training must go on. Alternative deliveries, with distance learning capabilities, are the only current answer to this dilemma.
 - Alternative deliveries can be very expensive to develop, but once they're developed, their cost goes way down. They represent a better ROI for the Coast Guard.
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Why and When Do I Do Media Selection? (continued)

- All organizations have the same problem, so they're all moving to alternative deliveries and distance learning. The Coast Guard is dependent on the Navy for many of its training needs. It needs to stay current with up-to-date training trends so it can share in what the Navy (and other agencies) develop(s).

NOTE: Many of the current and emerging media you might choose are very expensive to design and develop. Also, some of the emerging technologies may require hardware and software that the Coast Guard has no current plan for procuring. For those reasons, you need to:

- Either learn how to conduct media feasibility studies and cost benefit analysis or get help with this task. This SOP includes procedures for CBA and media feasibility. PTC staff has also provided Headquarters with many feasibility-type studies, CBAs, and evaluations of performance improvement outcomes using different media. They will be glad to share that information with you.
- Make sure you have read and stay current with Coast Guard policy COMDTINST 1554.1, Designing and Developing Interactive Courseware (ICW) and Styles and Standards for Development of ICW and EPSSs. These regulations govern the selection, design, and development of emerging technology media.
- Consult with the PTC staff concerning decisions you make about such media. COMDT (G-WT) has designed PTC as the Coast Guard's CBT Center of Excellence and, in that capacity, has entrusted the PTC with review and approval of the alternative delivery decisions TRACENs and training providers (TPs) make about media used to deliver instruction

When:

Here are some of the clues that let you know it is time to do media selection:

- As part of an FEA, if it is the type of FEA that produces a task list.
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**Why and When Do I Do Media Selection?
(continued)**

- As part of a JTA.
- To validate and add to TRACEN triage results.
- As part of training program design (either a new start or a revision of an old training course).
- As part of a CBA.
- To help with “What If?” planning. If you’re thinking of converting courses to an alternative delivery, you may want to do preliminary media selection work to identify potential deliveries.

What Is My Role?

As an instructor or course designer and developer, you are likely to be the SME performing the media selection.

You may also help someone else with performing media selection.

You may use media selection results someone else produced, when you design a training program.

Who Can Help Me?

The References Section of this SOP lists several publications that can help you in doing media selection and in selecting various delivery systems. PTC staff can help you. You may not need any help. The media selection process is fairly easy and quite a bit of fun.

First, try out the model we’ve given you for a job aid. If you don’t understand something about it, or it doesn’t seem to work, go see the PTC staff. They’ll answer all your questions.

What Is the Process for Getting Started?

You can do media selection any time you think it is a good idea. However, there are the clues we’ve discussed that act as triggers for doing media selection. When you are involved in those types of projects, be sure you include media selection results.

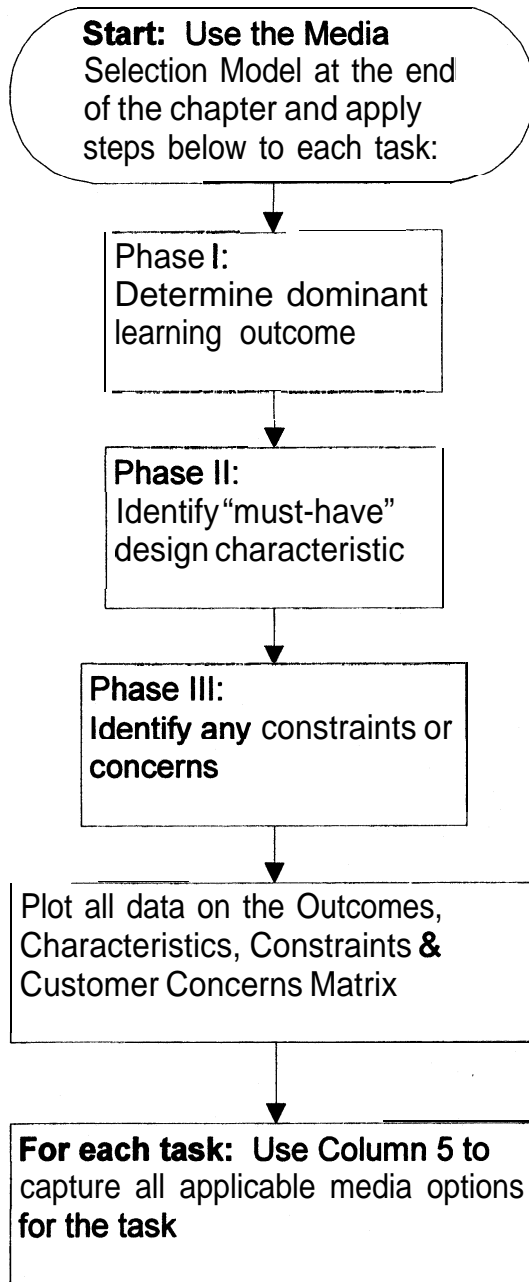
You may also be asked to do media selection for a specific project, either by your supervisor or by the program and training managers.

Delivery System(s) Job Aid

See the attached Media Selection Model (MSM). It is your job aid.

We have also included a tool from the Coast Guard's CDC course. The **Supporting Media Selection Assistance Chart** helps you match performance objective characteristics to media most likely to support those characteristics. You can find this chart at the end of this chapter.

Select Appropriate Delivery System(s) (Media Selection) Job Aid



Media Selection Model

**Performance, Analysis, & Design Branch
Performance Technology Center
Training Center Yorktown**

Media Selection:

Outcomes, Characteristics, Constraints, and Customer Concerns

Task: _____

#	Phase III: CONSTRAINTS AND CONCERNS. <i>Your response to these questions will help identify which media may be more appropriate to use than others.</i>	Yes	No
13	Are there severe consequences to inadequate performance/safety hazards inherent with improper performance? (i.e., potential safety hazard, potential damage to equipment)		
14	Is equipment required to support training? (i.e., engines, tools, reference materials)		
15	Is the equipment at the job site available for on-the-job training? (i.e., shutting down a system means vessel not able to get underway)		
16	Is it practical to use the actual system/equipment? (i.e., able to support mission with system down)		
17	Can the training be worked into the actual job? (i.e., watch standing)		
18	Is an instructor or experienced journeyman available at the job site?		
19	Is the task particularly difficult to learn or perform on the job? (i.e., physical/ environmental constraints; underway time)		
20	Will the mission be adversely affected by the length of time the student is away from the job?		
21	Is the task more appropriate for individual learning? (i.e., interaction with other people not a necessity)		
22	Does the nature of the job allow the student time to spend on a non-resident course? (i.e., watch standing, underway time)		
23	Is the appropriate facilities/equipment available to support alternative deliveries? (i.e., computers with CD drive for CBT course, downlink available for interactive video tele-training, Internet access)		
24	Is the target population widely dispersed geographically?		
25	Is the class size less than 15 students?		
26	Are the class convenings less than 5 per year?		
27	Is the instruction time for this task less than 4 hours?		
28	Does the information for this task change on an annual basis? (i.e., reference, instruction, procedure)		
29	Is there course content that is redundant with other courses? (i.e., Coast Guard, other agencies, commercial)		

Media Selection: Outcomes, Characteristics, Constraints, and Customer Concerns

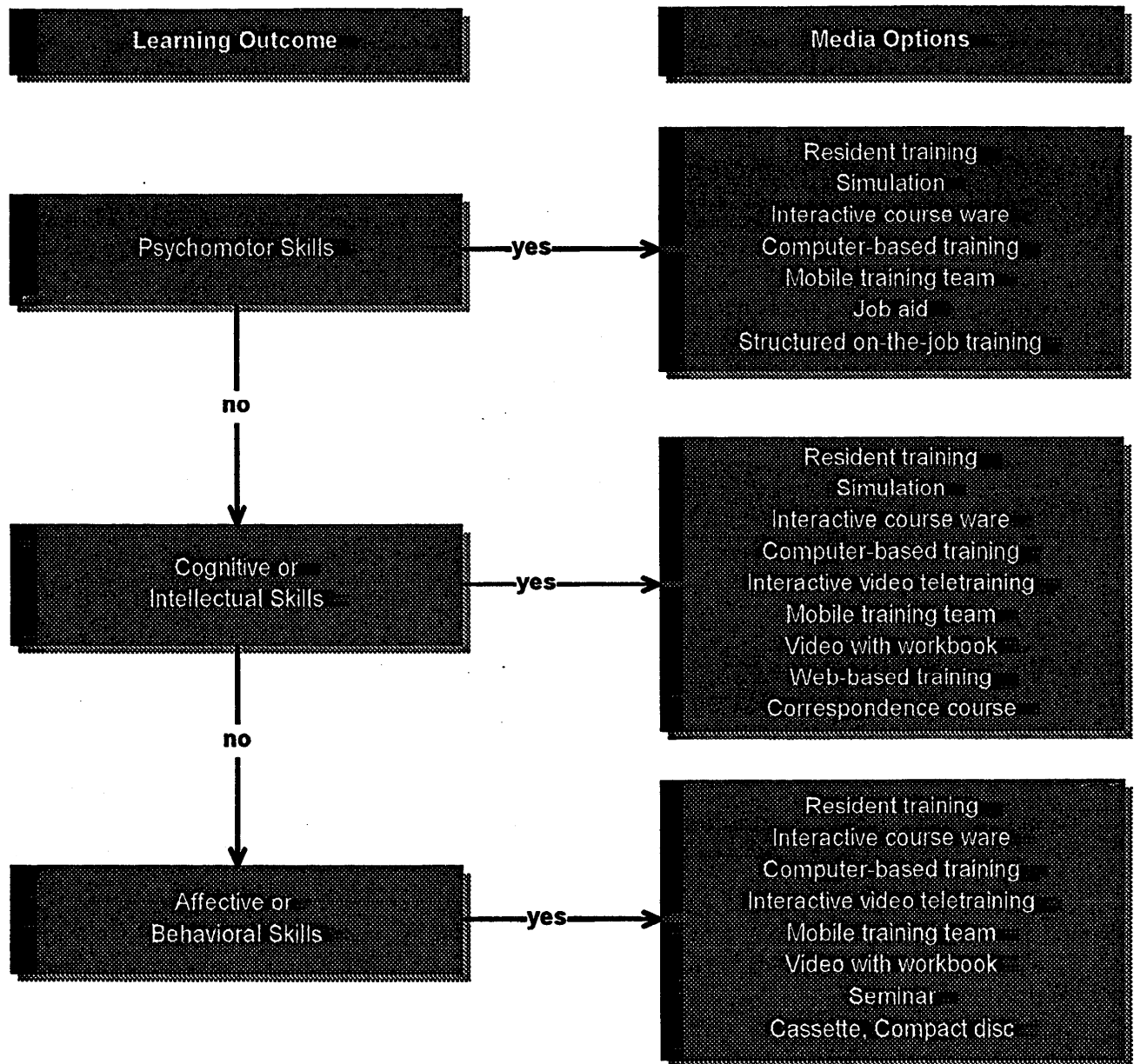
Qual/Task: _____

Learning Outcome: _____

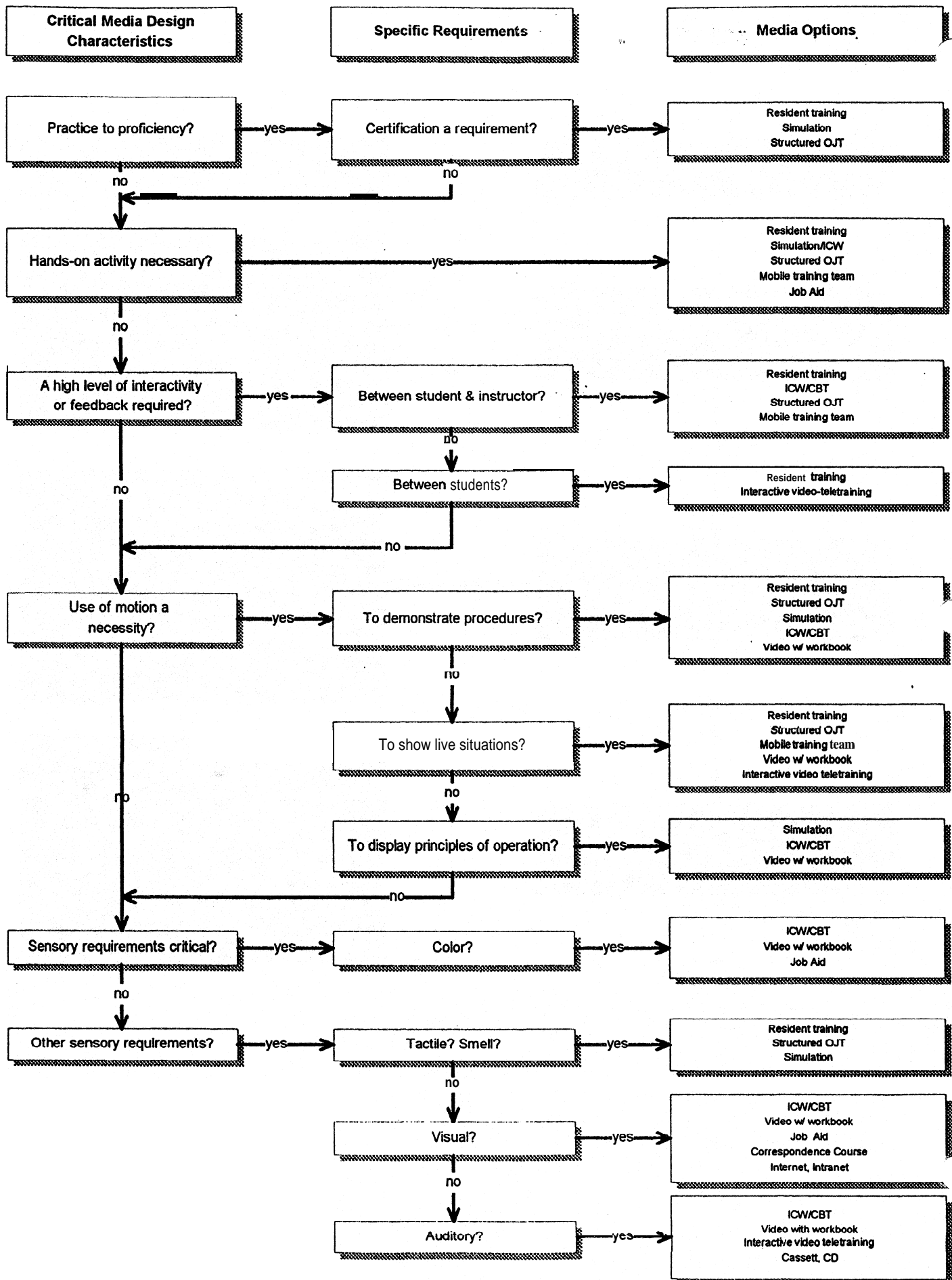
1. Using the Media Selection - Phase I Flowchart, place a check, in column 2, by each media selections identified as appropriate for the learning outcome. See questions 1-3 of the Media Selection questionnaire.
2. Using the Media Selection - Phase II Flowchart, place a check, in column 3, by each media selection identified as appropriate for the critical design characteristic(s) identified as necessary for learning to be achieved.
3. Using the Constraints and Concerns matrix, place a check, in column 4, by each media selection identified as appropriate.
4. Place a check, in column 5, by each media selection that has been checked in columns 2, 3, and 4.

Column 1 Media Selections	Column 2 Phase I Learning Outcome	Column 3 Phase II Design Characteristics	Column 4 Phase III Constraints & Concerns	Column 5 Options
1. Resident training (classroom, lab)				
2. Simulation, Virtual reality				
3. Interactive courseware (ICW)				
4. Computer-based training (CBT)				
5. Interactive video teletraining (IVT)				
6. Mobile training team (MTT)				
7. Correspondence course				
8. Structured on-the-job training				
9. Video with workbook				
10. Job Aid, EPSS, ESOM, IETM				
11. Seminar				
12. Cassette/Computer Disk				
13. Web-based training				
14.				
15				

Media Selection - Phase I



Media Selection - Phase II



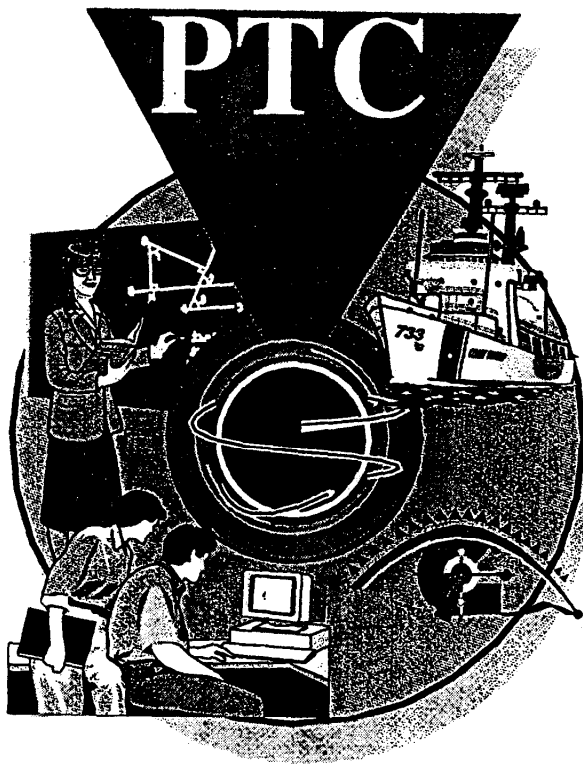
Media Selection - Phase III

If the answer is "yes" to question	then	and	Remarks
13	do not consider structured OJT if task involves using equipment; consider deliveries that include other than actual equipment (i.e., simulator, trainer, mock-up)	consider media options that require instructor interaction if task does not involve using equipment	Resident training is an option; however, conduct cost analysis on media options to identify most appropriate and cost effective.
14	consider deliveries that include equipment or simulation of equipment	if "yes" to #13, consider resident training or alternative deliveries that include other than actual equipment (i.e., simulator, trainer, mock-up)	
15 - 17	consider structured OJT	if 'yes' to #13, consider resident training or alternative deliveries that include other than actual equipment (i.e., simulator, trainer, mock-up)	
18	consider structured OJT	if 'yes' to #13, consider resident training or alternative deliveries that include other than actual equipment (i.e., simulator, trainer, mock-up).	MTT or IVT are options where experience at the-unit is not available.
19	do not consider structured OJT; consider alternative deliveries to resident training if other than actual equipment can be used	if 'yes' to #13, resident training becomes an option	
20	consider IVT if inter-activity is required; consider other alternative deliveries to resident training if individual learning is appropriate.	if 'yes' to #13, resident training becomes an option	Conduct cost analysis on media options
21	consider ICW, CBT, video with workbook, job aid, correspondence course, web-based training.	if "yes" to #13, resident training becomes an option	Conduct cost analysis on media options
22-24	consider alternative deliveries to resident training	if 'yes' to #13, resident training becomes an option	Conduct cost analysis on media options. If cost is a constraint, select option(s) that are low in cost.
25-27	conduct cost analysis on media options	select option(s) that are low in cost	ROI for high cost medium will not be realized for years on low throughput
28	conduct cost analysis on media options	select option(s) that are low in cost	
29	conduct a COTS/GOTS search	conduct cost analysis on media options.	



Quartermaster Third Class.

Performance Technology Center



U.S Coast Guard
Performance Technology Center
Training Center
Yorktown, VA

QUARTERMASTER THIRD CLASS
Job Task Analysis Media Selection Results

Question	Quals	Yes	No	% Yes	Recommend	Media Selection
A	ADMINISTRATION AND TRAINING					
01	Correct and maintain nautical publications.	75	2	0.97	OJT	
02	Correct and maintain nautical charts by:					
02a	Electronics	14	63	0.18	JA/T	Simulation/ICW Video w/ workbook
02b	Pen and ink	74	3	0.96	T	ICW/CBT Video w/ workbook
03	Use Chart No. 1 to identify navigational related information.	76	1	0.99	OJT	
04	Compute average daily rate of ship's chronometer.	34	42	0.44	NT	
05	Maintain a Timepiece ratebook.	36	41	0.47	NT	
06	Extract information contained in each of the following publications to plan a voyage:					
06a	Coast pilots.	69	8	0.90	OJT	
06b	Sailing directions.	65	12	0.84	OJT	
06c	Light lists.	63	14	0.82	OJT	
06d	Tide Tables	67	10	0.87	T	ICW/CBT Video w/ workbook
06e	Tidal Current Tables	65	12	0.84	T	ICW/CBT Video w/ workbook
06f	Fleet guides.	57	20	0.74	OJT	
07	Extract information contained in each of the following publications:					
07a	List of Lights	54	23	0.70	NT	
07b	Dutton's	61	16	0.79	OJT	
07c	Bowditch	71	6	0.92	JA/T	CBT Correspondence Course
07d	Hobb's	19	58	0.25	OJT	
07e	World Port Index	40	37	0.52	NT	
07f	Pub 117 Radio Navigation Aids	18	59	0.23	NT	
07g	Distances Between Ports	42	35	0.55	NT	
07h	Pub 217 Maneuvering Boards	49	28	0.64	JA/T	CBT
08	Handle and stow classified and/or accountable material.	60	17	0.78	T	ICW/CBT Resident Training
09	Determine nautical chart and publication requirements for a cutter in accordance with Nautical Chart and Publication Allowance for Cutters.	56	21	0.73	JA/T	ICW/CBT Video w/ workbook
B	COMMUNICATIONS					
10	Identify all visual signal flags in the flag bag for:		4			
10a	International	64	13	0.83	NT	

Interactive Courseware (ICW), Computer-based Training (CBT)

QUARTERMASTER THIRD CLASS
Job Task Analysis Media Selection Results

Question	Quals	Yes	No	% Yes	Recommend	Media Selection
10b	Allied	48	29	0.62	NT	
11	Identify emergency signals for:			0.00		
11a	Aircraft	25	52	0.32	OJT	
11b	Surface ship	47	30	0.61	OJT	
12	Transmit and receive Morse Code characters by:					
12a	Flashing light.	44	33	0.57	NT	
12b	Hand flags (Wig-Wam)	15	62	0.19	NT	
13	Encode and decode international signals in accordance with Pub 102.	41	36	0.53	NT	
14	Transmit and receive international signals from Pub 102 by:					
14a	Flag hoist	38	39	0.49	NT	
14b	Flashing Light	37	40	0.48	NT	
14c	Hand flags	19	58	0.25	NT	
14d	Radio telephone	19	58	0.25	JA/T	ICW/Simulation Resident Training
14e	Sound-producing devices	17	60	0.22	JA/T	ICW/Simulation Resident Training
15	Transmit and receive Allied signals from Allied Communication Pubs by:					
15a	Flag hoist	33	44	0.43	NT	
15b	Flashing light	33	44	0.43	NT	
15c	Semaphore	31	46	0.40	NT	
15d	Radio telephone	10	67	0.13	JA/T	ICW/Simulation Resident Training
15e	Sound-producing devices	4	73	0.05	OJT	
16	"Transmit, receive, and record message traffic via radiotelephone."	44	33	0.57	T	ICW/Simulation Resident Training
17	Transmit and receive semaphore characters.	28	49	0.36	NT	
18	Use prosigns in visual communications as outlined in ACP 129.	28	49	0.36	NT	
19	Use Collective and Commander call signs in visual communications as outlined in ACP 129.	25	52	0.32	NT	
20	Transmit and receive basic visual message traffic using the following formats:					
20a	Plaindress	32	45	0.42	NT	
20b	Abbreviated Plaindress	25	52	0.32	NT	
21	Prepare and service a plaindress visual message for transmission by:					
21a	Flashing light	31	46	0.40	NT	
21b	Semaphore	24	53	0.31	NT	
22	Maintain a visual message log.	27	50	0.35	NT	

QUARTERMASTER THIRD CLASS
Job Task Analysis Media Selection Results

Question	Quals	Yes	No	% Yes	Recommend	Media Selection
C	NAVIGATIONAL SYSTEMS					
23	Compute time of sunrise and sunset using:					
23a	Nautical Almanac	69	8	0.90	T	ICW CBT
23b	Tides Table	26	51	0.34	T	ICW CBT
23c	Air Almanac	11	66	0.14	NT	
23d	Computer-based calculations	50	27	0.65	OJT	
23e	"Media (newspaper, television, etc.)"	12	65	0.16	NT	
24	Solve the following time calculations:					
24a	Zone time	67	10	0.87	OJT	
24b	Greenwich Mean Time (GMT)	69	8	0.90	OJT	
24c	Coordinated Universal Time (UTC)	53	24	0.69	OJT	ICW CBT
24d	Local Mean Time (LMT).	61	16	0.79	JA/T	
25	Compute time of Local Apparent Noon (LAN) using:					
25a	Nautical Almanac.	40	37	0.52	NT	
25b	Computer-based calculations	18	59	0.23	NT	
26	Determine distance using a stadimeter.	24	53	0.31	NT	
27	Obtain soundings using an echo sounder (fathometer).	77		1.00	OJT	
28	Enter soundings in appropriate log.	72	5	0.94	OJT	
29	Compute gyro error by:					
29a	Azimuth of the sun	53	24	0.69	T	ICW/CBT Resident Training
29b	Azimuth of Polaris	22	55	0.29	JA/T	ICW/CBT Resident Training
29c	Amplitude of the sun	46	31	0.60	T	ICW/CBT Resident Training
29d	Terrestrial range	70	7	0.91	T	ICW/CBT Resident Training
29e	Trial and error (Triangulation)	64	13	0.83	T	ICW/CBT Resident Training
30	Determine horizontal sextant angles.	20	57	0.26	NT	
31	Plot the following navigational information:					
31a	Visual fixes.	74	3	0.96	T	Structured OJT ICW/Simulation
31b	Horizontal sextant angles.	16	61	0.21	T	Structured OJT ICW/Simulation
31c	Radar fixes.	74	3	0.96	T	Structured OJT ICW/Simulation
31d	Electronic fixes.	76	1	0.99	OJT	
31e	Dead reckoning position.	74	3	0.96	OJT	
31f	Estimated position.	66	11	0.86	OJT	
31g	Celestial fixes	31	46	0.40	NT	

QUARTERMASTER THIRD CLASS
Job Task Analysis Media Selection Results

Question	Quals	Yes	No	% Yes	Recommend	Media Selection
32	Compute tides and currents using:					
32a	Publications (manually)	63	14	0.82	JA/T	ICW Resident Training
32b	Computer-based calculations	41	36	0.53	OJT	
32c	Media	7	70	0.09	NT	
33	Determine ship's speed of advance and speed over ground using:					
33a	"Time, speed, and distance calculations."	72	5	0.94	T	ICWKBT Resident Training
33b	Electronic calculations.	67	10	0.87	OJT	
34	Prepare a chart for use in restricted waters using:					
34a	Tracklines	68	9	0.88	T	ICWKBT Resident Training
34b	Waypoints	66	11	0.86	T	ICWKBT Resident Training
34c	Gazetteer points	56	21	0.73	T	ICWKBT Resident Training
34d	Shoaling	70	7	0.91	OJT	
34e	Advance and transfer (using ship's tactical data)	60	17	0.78	T	ICW/CBT Resident Training
34f	Turn bearings and ranges	69	8	0.90	T	ICW/CBT Resident Training
34g	Danger bearings and-ranges.	68	9	0.88	T	ICWKBT Resident Training
D	OPERATIONAL AND PREVENTIVE MAINTENANCE					
35	Clean and properly stow the following equipment:					
35a	Azimuth circle	51	26	0.66	NT	
35b	Bearing circle	47	30	0.61	NT	
35c	Alidade	73	4	0.95	OJT	
35d	Sextant	46	31	0.60	NT	
35e	Binoculars	73	4	0.95	OJT	
35f	Stadimeter	25	52	0.32	NT	
35g	Signal lights	38	39	0.49	OJT	
E	WATCHSTANDING					
36	Render passing honors	53	24	0.69	NT	
37	Recognize naval and merchant flags of principal maritime nations.	49	28	0.64	JA/T	CBT ICW
38	Recognize the following personal flags and pennants:					
38a	Coast Guard Flag Officers	66	11	0.86	NT	
38b	Broad and burgee pennants.	24	53	0.31	NT	
39	Perform duties as helmsman:					
39a	At sea	46	31	0.60	T	Structured OJT
39b	In restricted waters	46	31	0.60	T	Structured OJT
39c	During steering casualties	43	34	0.56	T	Structured OJT
39d	During underway replenishment	17	60	0.22	T	Structured OJT

QUARTERMASTER THIRD CLASS
Job Task Analysis Media Selection Results

Question	Quals	Yes	No	% Yes	Recommend	Media Selection
39e	During flight operations	22	55	0.29	T	Structured OJT
40	Wind and compare chronometers daily at the proper time and make appropriate report.	37	40	0.48	NT	
41	Make bridge preparations for getting the ship underway and entering port.	77		1.00	T	Simulation/ICW Video w/ workbook
42	Solve basic maneuvering board problems for:					
42a	Course and speed	48	29	0.62	JA/T	ICW Resident Training
42b	Time of Closest Point of Approach (CPA)	48	29	0.62	JA/T	ICW Resident Training
42c	Distance of CPA	46	31	0.60	JA/T	ICW Resident Training
42d	Bearing to CPA	44	33	0.57	JA/T	ICW Resident Training
42e	True wind.	65	12	0.84	T	ICW Resident Training
42f	Desired wind	36	41	0.47	T	ICW Resident Training
42g	Intercept and avoidance	38	39	0.49	JA/T	ICW Resident Training
42h	Set and drift calculations	43	34	0.56	T	ICW Resident Training
43	Maintain unit logs (CG-4380 series).	77		1.00	T	ICW/CBT Video w/ workbook
44	Maintain a navigational plot in unrestricted waters for a minimum of eight (8) fixes.	71	6	0.92	T	ICW/CBT Resident Training
45	Perform the following tasks in restricted waters during navigational detail:					
45a	Bearing taker	50	27	0.65	T	ICW Simulation Resident Training
45b	Recorder	58	19	0.75	T	ICW Simulation Resident Training
45c	Radar operator	55	22	0.71	T	Structured OJT ICW/Simulation
45d	Plotter	67	10	0.87	T	ICW/CBT Resident Training
45e	Evaluator	35	42	0.45	T	ICW/Simulation Resident Training
45f	Aft steering	28	49	0.36	T	ICW Simulation Resident Training
46	Perform a synoptic weather observation and record the data.	42	35	0.55	NT	
47	Prepare a synoptic weather message for transmission.	33	44	0.43	NT	

QUARTERMASTER THIRD CLASS
Job Task Analysis Media Selection Results

Question	Quals	Yes	No	% Yes	Recommend	Media Selection
48	Determine compass course and true course by applying the following compass errors:					
48a	Variation	74	3	0.96	T	ICW/CBT Video w/ workbook
48b	Deviation	74	3	0.96	T	ICW/CBT Video w/ workbook
48c	Gyro error	74	3	0.96	T	ICW/CBT Video w/ workbook
49	Demonstrate a working knowledge of the Navigation Rules (COMDTINST M16672.2B).	74	3	0.96	T	ICW/CBT Video w/ workbook
F	AIDS TO NAVIGATION					
50	Demonstrate a working knowledge of the following buoyage systems:					
50a	IALA A	40	37	0.52	JA/T	ICW/CBT Video w/ workbook
50b	IALA B	68	9	0.88	T	ICW/CBT Video w/ workbook
50c	Western Rivers	7	70	0.09	NT	
50d	Uniform State Waterway Marking System (USWMS)	1	76	0.01	NT	
50e	Atlantic Intracoastal Waterway (AICW)	22	55	0.29	JA/T	ICW/CBT Video w/ workbook
51	Compute the distance of visibility of a light by:					
51a	Nominal range	40	37	0.52	NT	
51b	Geographical range	34	43	0.44	NT	
51c	Luminous range	37	40	0.48	NT	
52	Demonstrate a working knowledge of the characteristics of aids to navigation found in the IALA B buoyage system including non-lateral aids.	63	14	0.82	JA/T	ICW/CBT Video w/ workbook

Supporting Media Selection Assistance Chart

